

5. OTHER REQUIRED CEQA/NEPA SECTIONS

5.1 INTRODUCTION TO ADDITIONAL CEQA/NEPA REQUIREMENTS DISCUSSED IN THIS SECTION

This chapter addresses other considerations required by the CEQA and the NEPA, including the potential for growth-inducing effects of the Project; whether the Project or its component actions would have unavoidable significant impacts; the irreversible or irretrievable commitment of resources; and the relationship between short-term uses of the Project and long-term productivity. This chapter also discusses the environmental topics that the lead agencies determined did not have the potential to result in significant adverse impacts and, therefore, were not evaluated in detail in this EIR/EIS. Impacts that were evaluated in this EIR/EIS and determined not to be significant are summarized in Section 4.

5.2 SIGNIFICANT ENVIRONMENTAL EFFECTS OF PROPOSED PROJECT THAT CANNOT BE MITIGATED TO LESS THAN SIGNIFICANT

The environmental impacts of the Project are described in Section 4 (Environmental Analysis). The impact analysis concludes that all of the potentially significant impacts of the proposed Project can be reduced to less than significant levels through the application of feasible mitigation measures. Therefore, implementation of the proposed Project is not expected to result in any significant and unavoidable impacts. However, under Landing Alternatives 1 and 2, a significant and unavoidable impact would occur during cable installation and decommissioning when the cable laying vessel would need to operate near shore, blocking access to Moss Landing Harbor during both the pre-lay grapnel run and during main cable lay operations. This would probably cause several hours of delays in vessel traffic entering the leaving the Harbor. When not blocking the Harbor entrance, the presence of the cable laying vessel in the near vicinity of Moss Landing Harbor, which is an area with heavy vessel traffic and only a limited area for maneuvering, could increase the potential for vessel accidents.

5.3 IRREVERSIBLE/IRRETRIEVABLE COMMITMENT OF RESOURCES

The NEPA (40 CFR §1502.16) and State CEQA Guidelines (14 CCR §15126.2[c]) require analysis of significant irreversible and irretrievable effects. A resource commitment is considered *irreversible* when primary or secondary impacts from its use limit future use options. Irreversible commitment applies primarily to nonrenewable resources, such as minerals or cultural resources, and to those resources that are renewable only over long time spans, such as soil productivity. A resource commitment is considered *irretrievable* when the use or consumption of the resource is neither

renewable nor recoverable for use by future generations. Irretrievable commitment applies to the loss of production, harvest, or natural resources. The proposed Project would involve two types of resources: (1) general industrial resources including capital, labor, fuels, and construction materials; and (2) project-specific resources such as biotic and cultural resources along the cable route and at the affected landing areas. The industrial resources expended in Project construction would not be retrievable if the Project is implemented. This section is meant to convey any resources that would be lost either temporarily or permanently as a result of undertaking the Project.

Installation activities would occur over a short period of time and would utilize fairly conventional cable laying and drilling techniques. Installation would primarily consist of cutting a narrow trench to a depth of 3.3 feet (1 m), where feasible, along soft-bottom portions of the sea route; installing HDD conduit up to 4700 feet long (1433 meters) from the shore landing site offshore to meet the cable in the nearshore area; and connecting the cable to the MARS Shore Facility. Cable laying, science node installation, HDD, and Shore Facility construction would require inputs of fuel, energy, and material resources. Operations would use minimal energy resources to maintain systems and power experiments through the science node. The proposed cable has an expected life of 25 years, and the terrestrial cable route and shore facilities would be located in previously disturbed areas. During the life of the Project, the land used for the landing and shore facilities and a narrow strip along the sea floor for the cable route would be committed to the Project, but upon decommissioning the affected areas would be returned to their pre-Project uses.

Consequently, the Project would not result in significant irreversible environmental changes or irretrievable commitments of environmental resources.

5.4 GROWTH-INDUCING IMPACTS OF THE PROPOSED PROJECT

The NEPA (40 CFR §1508.8) defines indirect effects as those that include growth-inducing effects or other effects related to induced changes in population density or growth rate. The CEQA requires a discussion of the ways in which a proposed project could be an inducement to growth. The State CEQA Guidelines [14 CCR §15126.2 (d)] identify a project to be growth-inducing if it fosters economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. New employees from commercial and industrial development and new populations from residential development represent direct forms of growth. The expansion of urban services into a previously unserved or under-served area, the creation or extension of transportation links, or the removal of major obstacles to growth are examples of projects that are growth inducing. It is important to note that these

direct forms of growth have a secondary effect of expanding the size of local markets and attracting additional economic activity to the area.

Typically, the growth-inducing potential of a project would be considered significant if it fosters growth or a concentration of population above what is assumed in local and regional land use plans, or in projections made by regional planning authorities. Significant growth impacts could also occur if the project provides infrastructure or service capacity to accommodate growth levels beyond those permitted by local or regional plans and policies.

The construction and operation of the Project itself would not affect the employment patterns in the area. Construction of land-based components of the Project would be performed by workers drawn from the Monterey Bay and San Francisco Bay area labor pools. It is anticipated that these workers would commute to the project area and would not require additional local housing. Installation of the science node and undersea cable would largely be performed by the crew of the Alcatel vessel *Ile de Ré*, and would be housed aboard the *Ile de Ré*. The Monterey Bay area provides a large number of hotels and inns which would be able to accommodate the temporary housing needs of any non-local construction workers. It is not anticipated that any personnel would need to permanently relocate for construction of the Project. Similarly, operation of the Project would largely be conducted by existing MBARI personnel. Although visiting researchers may temporarily relocate to conduct experiments using the Project, the facilities for guest researchers, hotels, and inns can accommodate the housing needs of non-local visitors associated with the Project. Therefore, no negative impacts would occur. Over the long term, the Project would have no impact on population growth, as no long-term growth employment would result from Project operations.

5.5 RELATIONSHIP BETWEEN SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

The NEPA (40 CFR §1502.16) requires that an EIS consider the relationship between short-term uses of the environment and the impacts that such uses may have on the maintenance and enhancement of long-term productivity of the affected environment. This section compares the short- and long-term environmental effects of the Project.

Short-term impacts would result from laying the undersea cable and science node as well as the landing of the cable and installation of the shore facilities. These actions would result in temporary adverse impacts on air quality, marine vessel traffic, and noise. Air quality impacts would occur as vessels used in construction and decommissioning could exceed daily NO_x emission thresholds. This could be mitigated to a less than significant level, however, through the use of low-emission fuel in all

1 diesel-powered equipment and contribution to an off-site NO_x emission reduction
2 program. Marine vessel traffic impacts could result as the presence of vessels used for
3 the proposed Project and the IODP Borehole Project would increase the risk for vessel
4 accidents in Monterey Bay. Scheduling of cable laying to remain outside of 1 nm of
5 borehole construction vessels would reduce impacts to less than significant levels.
6 Finally, construction equipment for the Project could exceed the Monterey County Noise
7 Control Ordinance, resulting in noise impacts, but the use of muffles, shields, or
8 enclosures of the HDD activity would reduce these impacts to less than significant
9 levels.

10 Long-term adverse impacts could result on cultural resources. Unknown shipwrecks
11 along the cable route could be disturbed by the Project, resulting in cultural resource
12 impacts, but could be mitigated to less than significant levels through research and
13 survey of the sea route as well as avoidance of any shipwrecks identified.

14 As described for each potentially significant impact, this EIR/EIS identifies feasible
15 mitigations that would result in a reduction of the impacts described above to a less than
16 significant level. On balance, impacts would not substantially affect the maintenance
17 and enhancement of long-term environmental productivity, nor pose long-term risks to
18 health or safety. The long-term environmental consequences of the Project are
19 minimal. Implementation of the Project would result in few environmental impacts, and
20 impacts would either occur only in the short-term or be mitigable to less than significant
21 levels in the long term.

22 **5.6 ENERGY REQUIREMENTS AND CONSERVATION POTENTIAL**

23 As described above in Section 5.3, Irreversible/Irretrievable Commitment of Resources,
24 energy would be required for the cable laying, science node installation, HDD, Shore
25 Facility construction, and eventual decommissioning would require fuel and energy
26 resources. Operation of the science node once installed, however, would use
27 significantly less energy than that used to install it. Installation of the science node
28 would allow for the performance of experiments that would otherwise require frequent
29 trips by research vessels to perform and maintain. Research vessels would continue to
30 travel to and from MBARI on a daily basis. Utilization of the science node in addition to
31 use of the research vessels, however, would ultimately conserve energy as the vessels
32 are free to perform other experiments and research while the science node serves as a
33 substantially more energy efficient platform for performing deep-sea research. With the
34 Project, more research can be accomplished in a shorter duration with lower energy
35 requirements than if all research had to be performed by research vessels and ROVs.

5.7 EFFECTS FOUND NOT TO BE SIGNIFICANT

The lead agencies determined during the scoping process that the following environmental issue areas would have less than significant impacts. Therefore, these issues were not further analyzed in Chapter 4 of this EIR/EIS.

Aesthetics

After cable installation, the only new above ground feature of the Project would be the ISO van to be located on MBARI's property adjacent to Sandholdt Road. This small structure would not be of a size or nature that would result in a significant change in the visual character of the area. Therefore, it would not significantly affect scenic resources or degrade the existing visual character of the site surroundings. The ISO van would not have exterior lighting or highly reflective surfaces; therefore, no light or glare is anticipated that would adversely affect day or nighttime views in the area.

Agriculture

Except for the landing site and ISO van location, the features of the Project would be located along the bottom of Monterey Bay. The landing site and ISO van location are beach/dune areas and do not have soils suitable for cultivation. No land in the immediate vicinity is used for agricultural purposes. Therefore, the proposed Project would have no affect on agricultural resources or operations.

Hydrology

Since the majority of the proposed cable would be buried beneath Monterey Bay, it would not affect drainage patterns or currents. The unburied portions of the cable would not alter ocean currents. During HDD at the landing site, some minor and temporary ground disturbance would occur. Best Management Practices would be implemented at the HDD site to minimize potential impacts on water quality from erosion and transport of soils. After installation, the ground surface would be restored to its previous condition, resulting in no significant change in surface water drainage.

During HDD, there is potential for drilling muds to be inadvertently released into the waters of Monterey Bay. Impacts associated with accidental releases of drilling muds are discussed in Section 4.5 (Marine and Near-Coastal Biological Resources) and Section 4.6 (Marine Water and Sediment Quality and Oceanography).

1 **Land Use and Planning**

2 The only portion of the proposed Project subject to land use regulations is the ISO van
3 that would be used as the Shore Facility for the MARS cable. This type of facility is
4 permitted by the County's land use regulations, but may require approval of a Coastal
5 Development Permit and a building permit. The proposed Project would not have the
6 ability to physically divide an established community, and does not conflict with any
7 identified land use plan, policy, or regulation applicable to the Project that was adopted
8 for the purpose of avoiding or mitigating an environmental effect.

9 **Mineral Resources**

10 The Project does not preclude or involve significant extraction and removal of material
11 that may be deemed to be a locally important mineral resource of value to the region
12 and residents of the State. The project area is not designated as a Mineral Resource
13 Zone by the California Division of Mines and Geology.

14 **Population and Housing**

15 Installation of the proposed Project would create a small number of temporary jobs that
16 are expected to be handled by contracted workers, such as the crew of the cable laying
17 vessel *Ile de Ré*. These contracted jobs would not result in long-term employment or
18 population growth and, therefore, would not affect the demand for housing nor the
19 availability of housing in the local area or region. Similarly, operation of the MARS
20 cabled observatory would not directly result in a substantial increase employment at
21 MBARI since the Project would be operated and maintained primarily by existing
22 personnel, and the majority of experiments would be implemented by independent
23 researchers and scientific teams.

24 **Public Services**

25 The proposed Project is not expected to create any temporary or long-term demands on
26 public services. Therefore, no new fire protection, police, school, park, or other public
27 facilities would need to be constructed to serve the proposed Project.

28 **Recreation**

29 The nearest recreational resources to the Project site include Moss Landing State
30 Beach, Moss Landing Harbor (recreational boating), Elkhorn Slough (kayaking, bird
31 watching), and the beach adjacent to the landing site (surf fishing, beach combing).
32 Recreational activities at these nearby areas could be temporarily disrupted by noise
33 from HDD activities the proposed landing site, but would otherwise be unaffected by

1 either installation or operation of the proposed Project. Potential noise impacts
2 associated with HDD are discussed in Section 4.8. Noise impacts on recreational
3 resources can be mitigated to less than significant levels.

4 **Transportation**

5 Land-based transportation systems would not be significantly affected by the proposed
6 Project. During HDD operations and installation of the Shore Facility, vehicle trips
7 would occur to transport equipment, materials, and workers to and from the work site.
8 Because the amount of equipment and materials needed is small and the number of
9 required workers is few, only a small number of vehicle trips would be generating during
10 installation. Roadways exist to transport vehicles to and from the HDD and Shore
11 Facility site and these roadways would not be obstructed or otherwise disrupted by HDD
12 operations or Shore Facility installation. During Project operation, vehicle trips will
13 occasionally be generated at irregular intervals to deliver and remove equipment used
14 for the various experiments and operations of the MARS cable. These trips are
15 expected to be very few in number during any given year of cable operation and not
16 great enough to have any significant effect on roadway capacity. No other
17 transportation-related effects are anticipated.

18 **Utilities and Service Systems**

19 The only utility service required to serve the proposed Project is electricity, which is
20 currently available at the proposed ISO van location. The electrical demands of the
21 Project are small and would not require construction of any new or upgraded electrical
22 generation or transmission facilities.